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Before the
Federal Communications Commission
Washington, D.C. 20554

In the Matter of	)	MM Docket No. 99-25
	)	
Creation of a	)	RM-9208
Low Power Radio Service	)	RM-9242

To: The Commission

COMMENTS OF THE NORTH CAROLINA ASSOCIATION OF BROADCASTERS AND THE VIRGINIA ASSOCIATION OF BROADCASTERS

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Volume 3 of 3

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Volume 2

Technical Comments of Graham Brock, Inc. . . . . Exhibit 1

Technical Exhibit

Tabulated Service Contour for LP1000, Roanoke, Virginia, Using WJLM(FM) Site as Reference . . . . . A

Contour Map for LP1000, Roanoke, Virginia, from WJLM(FM) Site . . . . . B

Number of Potentially Available LP1000 Stations, North Carolina and Virginia C

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Low Power FM Searches

Charlotte, North Carolina . . . . . F

Greenville, North Carolina . . . . . G

Hope Mills, North Carolina . . . . . H

Louisburg, North Carolina I

Roxboro, North Carolina . . . . . J

Charlottesville, Virginia . . . . . K

Gloucester, Virginia L

Manassas, Virginia . . . . . M

Richmond, Virginia . . . . . N

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Volume 3

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Exhibit 2

Overlapping Coverage and Interference Contours

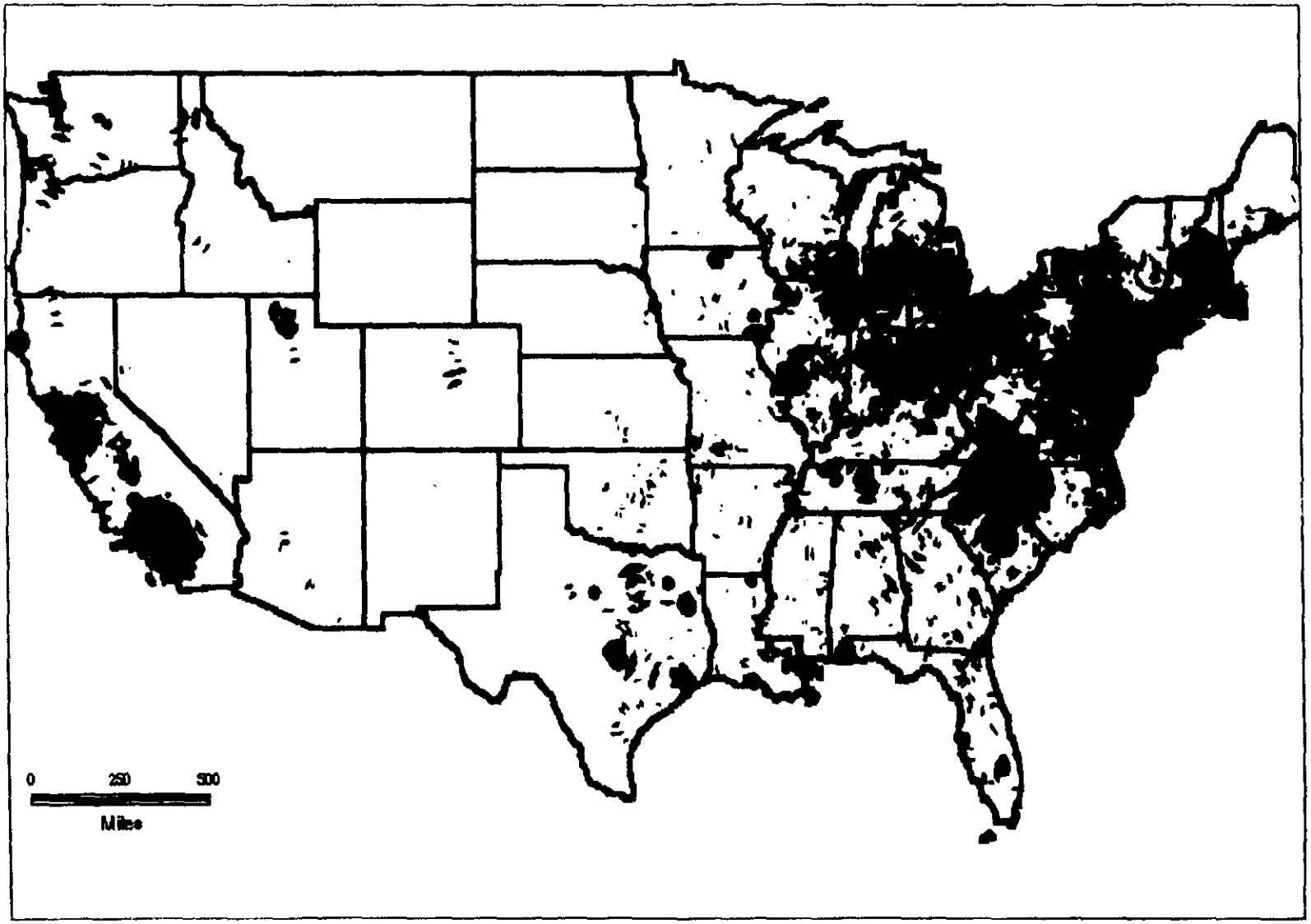

FIGURE 1

MLJ

Exhibit 3

PREDICTED ANALOG INTERFERENCE TO WIST-FM CH 252A THOMASVILLE, NC

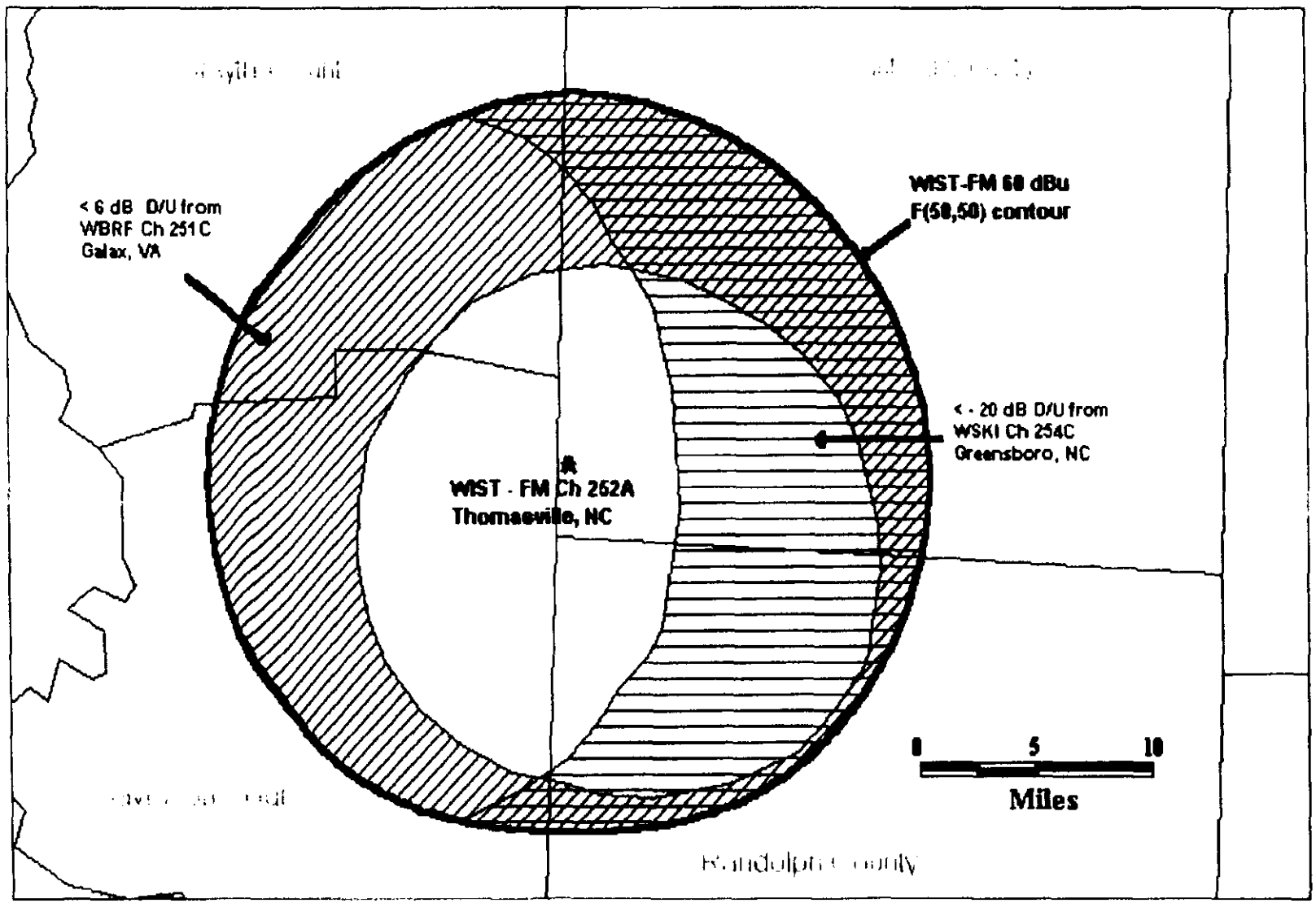

FIGURE 2

MLJ

PREDICTED ANALOG INTERFERENCE TO WIST-FM CH 252A THOMASVILLE, NC

Within WIST - FM 60 dBu: 389,259 persons in 698 sq. mi.

Interference from Station:	Affected area sq. mi:	% of Total:	Affected Population:	% of Total:
WBRF	334	47.9	154,787	39.8
WKSI	288	41.3	92,900	23.9

Station WIST, a Class A station, is severely short spaced to two class C stations: WBRF on the lower first adjacent channel and WKSI on the upper second adjacent channel. WIST is 68.0 kilometers short of the minimum distance to WBRF, and 75.8 kilometers short to WKSI. As a result the predicted WIST-FM interference-free area is substantially reduced from the normally protected coverage area. The interference-free area contains 125,376 persons in 208 square miles. These values represent losses of approximately 70 percent, that is, loss in area of 70.2 percent and 67.8 percent of population.

PREDICTED ANALOG INTERFERENCE TO WJFK-FM CH 294B MANASSAS, VA

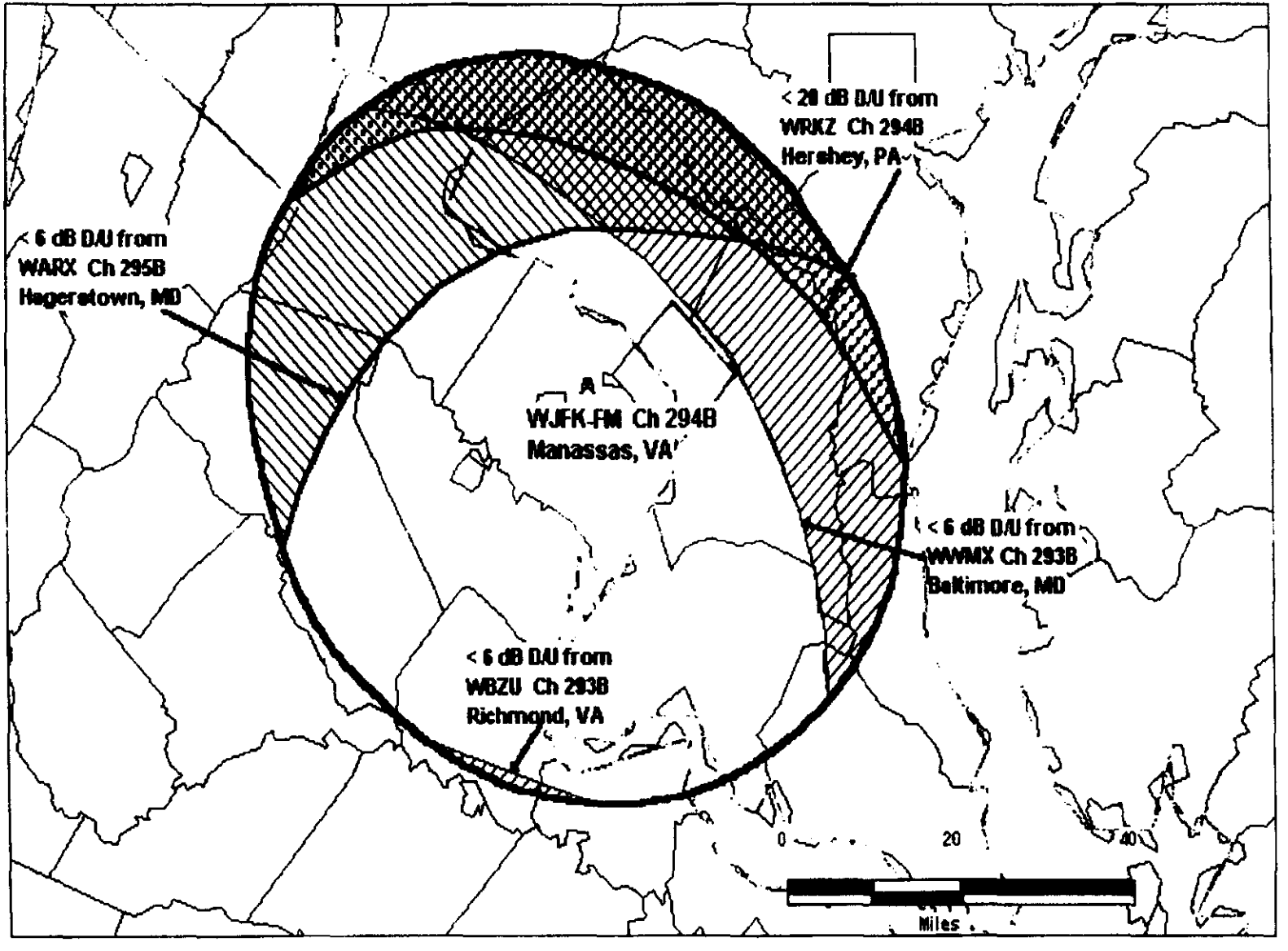

FIGURE 4

MLJ

PREDICTED ANALOG INTERFERENCE TO WJFK-FM CH 294B MANASSAS, VA

Within WJFK-FM 54dBu 3,917,255 persons in 4224 sq. mi.

Interference from Station:	Affected area sq. mi:	% of Total:	Affected population:	% of Total:
WARX	1169	27 7	490,519	12.5
WMMX	1075	25.4	1,120,510	28.6
WRKZ	526.5	12.5	252,615	6.4
WBZU	18.37	0 4	8,498	0.2

WJFK-FM receives extensive interference from stations WARX and WMMX on the upper and lower first adjacent channels. A large and populous area (401,297 persons in 519 square miles) is predicted to receive interference from both upper and lower first adjacent channels simultaneously. This area represents 10.2 percent of the population and 12.3 percent of the area within WJFK-FM's 54 dBu service contour

The WJFK-FM net interference-free area contains 2,761,590 persons in 2453 square miles. Thus, the loss area is 1771 square miles or 41.9 percent of the predicted WJFK-FM normally protected coverage area. The population within the predicted loss area is 1,155,665 persons or 29.5 percent of the predicted WJFK-FM normally protected coverage area.

PREDICTED ANALOG INTERFERENCE TO WQMG CH 246C GREENSBORO, NC

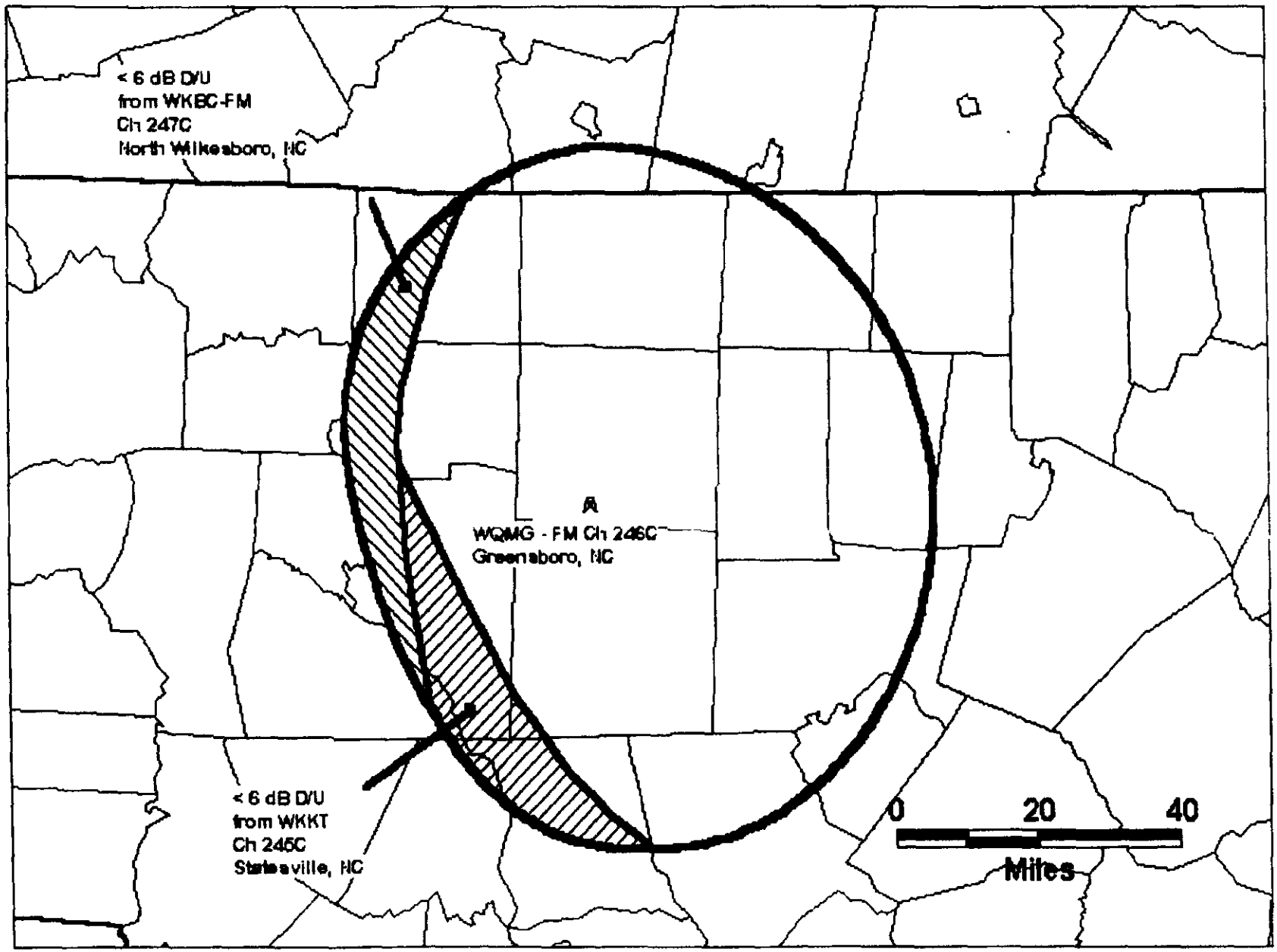

FIGURE A-4

MLJ

PREDICTED ANALOG INTERFERENCE TO WQMG-FM CH 246C GREENSBORO, NC

Within WQMG-FM-60dBu: 1,268,431 persons in 5916 sq. mi.

Interference from Station:	Affected area sq. mi:	% of Total	Affected Population:	% of Total:
WKKT	670	11.3	106,144	8.4
WKBC	363	6.1	82,714	6.5

Stations WKBC and WKKT are upper and lower first adjacent channel stations to WQMG-FM. The area of predicted mutual interference from both stations contains 50,869 persons in 228 square miles. The percentages of the predicted WQMG-FM normally protected coverage area are 10.2 percent of the population and 12.3 percent of the area.

The WQMG-FM net interference free area contains 137,989 persons in 5114 square miles. Thus, the loss area is 802 square miles or 13.6 percent of the predicted WQMG-FM normally protected coverage area. The population within the predicted loss area is 137,989 persons or 10.9 percent of the predicted WQMG-FM normally protected coverage area.

PREDICTED ANALOG INTERFERENCE TO WKBC - FM CH 247C NORTH WILKESBORO, NC

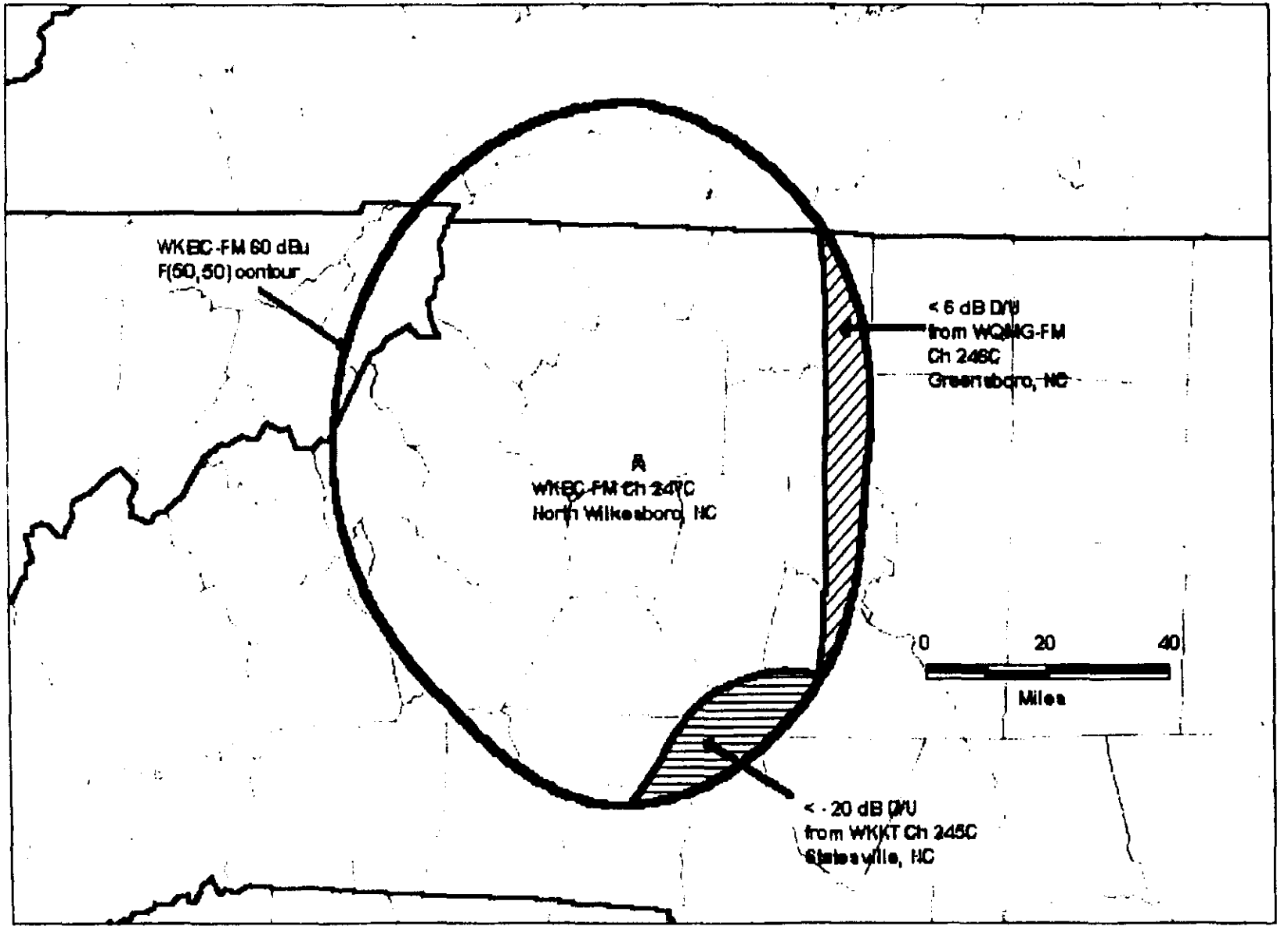

Figure A-5

MLJ

PREDICTED ANALOG INTERFERENCE TO WKBC-FM CH 247C NORTH WILKESBORO, NC

Within WKBC-FM - FM 60 dBu: 334,133 persons in 6861 sq. mi.

Interference from Station:	Affected area sq. mi:	% of Total:	Affected Population:	% of Total:
WKKT	266	3.9	53,699	6.9
WQMG	348	5.1	37,342	4.8

Exhibit 4

Exhibit 4

Notes Regarding
Where Surveyed Radio Listeners Actually Are

This Exhibit briefly describes the methodology used in compiling and analyzing the data that underlie the contour maps provided in Exhibit 5 and that are summarized in Table 4 in the text.

Because of the difficulty in acquiring the data and properly interpreting it, NCAB and VAB determined that data should be obtained for only a few selected radio stations. In addition, because the 34 dBu contour of a larger Class C station could encompass as many as five different states (e.g., the 34 dBu contour of a Class C station in western Virginia could encompass Virginia, North Carolina, West Virginia, Tennessee, and Kentucky), the radio stations were limited to Class A stations only.

The seven stations selected and their principal Arbitron radio markets are as follows:

Station	Principal Market
WCCG(FM), Hope Mills, NC	Fayetteville, NC
WKRX(FM), Roxboro, NC	Greensboro, Winston Salem-High Point, NC
WCZI(FM), Washington, NC	Greenville-New Bern-Jacksonville, NC
WZXI(FM), Buffalo Gap, VA	Harrisonburg, VA
WQMZ(FM), Charlottesville, VA	Charlottesville, VA
WXGM(FM), Gloucester, VA	Norfolk-Virginia Beach-Newport News, VA
WJRV(FM), Richmond, VA	Richmond, VA

The contour maps were created by overlaying the predicted 60 dBu, 40 dBu, and 34 dBu contours of each selected radio station over commercially-available zip code maps. Because zip code boundaries do not correspond with contour lines, a zip code was determined to be either inside the 60 dBu contour or outside the 60 dBu contour based on whether more than 50% of the area (not population) of the zip code lay inside or outside the overlaid 60 dBu contour.

Arbitron provided customized data on the number of usable, sampled listener diaries returned within each zip code for both the Spring 1998 and Fall 1998 ratings periods so that the data for each station comprises an entire year. This data is provided in Exhibit 6. WJRV(FM), Richmond, underwent a call letter change, effective September 18, 1998, that was subsequent to the Spring 1998 ratings period. The data for WJRV in the Spring 1998 period is therefore provided as the data for WSMJ(FM), its previous call letters.

Arbitron provided data for the Total Survey Area ("TSA"), which is a geographic area that includes the Metro Survey Area and additional surrounding counties where relevant. The data further comprise only the usable diaries that are tabulated in producing the standard Arbitron reports (the "in-tab sample").

In the case of two of the seven stations, the stations were analyzed in terms of two markets.

Data for WJRV(/WSMJ) were obtained for both the Richmond and Norfolk-Virginia Beach-Newport News markets. Data for WCCG, Hope Mills, North Carolina, were obtained for both the Fayetteville and Raleigh-Durham markets. In these cases, where the same diary appears in the data sets for both markets, it was counted only once.

Arbitron further provided the Persons-Per-Diary Value ("PPDV") for each market for each ratings period. Based on statistical sampling techniques, the PPDV is the numerical value assigned to each in-tab diary for the purpose of projecting audience estimates to the entire population (ages 12 and over) in a market. The PPDV reflects the number of persons in the geographic/sex/age/ethnic (if applicable) group represented by each in-tab diary after sample balancing has been performed.

Table 4 is a straightforward compilation and summary of all of the data. The columns titled "Total Listeners" represent a tally of the number of returned diaries listing a given station in each ratings period multiplied by the appropriate PPDV for the station's principal market during that ratings period. In other words, the numbers in the "Total Listeners" columns represent the number of actual listeners of each station, as based on Arbitron's statistical sampling techniques, and not merely the number of potential listeners, i.e., the number of listeners who can get a station's signal but do not actually listen to it. In the cases of WCCG and WJRV, where a diary appears in the data set for the secondary market (i.e., Raleigh-Durham for WCCG and Norfolk-Virginia Beach-Newport News for WJRV), but not in the data set for the principal market, that diary is assigned the relevant PPDV of the secondary market. The columns titled "Listeners Inside 60 dBu Contour" and "Listeners Outside 60 dBu Contour" break down the numbers in the "Total Listeners" column based on whether a given zip code was assigned to be either inside or outside the predicted 60 dBu contour, as described above.

In several cases, zip codes appearing in the Arbitron data do not appear on the contour/zip code maps. In a few instances, the zip code does not appear because of the scale of the map. In the vast majority of cases, the zip codes do not appear either because the zip code map does not reflect a new zip code or because the zip code represents a post office box zip code only. In all of these cases, the zip code was associated with a particular city based on the United States Postal Service's website. This zip code was then assigned to be either inside or outside of the 60 dBu contour based on the location of the associated city with respect to the 60 dBu contour.

In two cases, diaries were associated with zip codes that do not exist. These were likely due to the diary keeper merely writing down the wrong number for his or her zip code. In both of these cases, these diaries have been ignored in the creation of Table 4.

Printouts from the United States Postal Service website for each of the zip codes that do not appear on the contour/zip code maps are attached to this Exhibit.

The contour/zip code maps themselves have been colored to reflect the location of actual surveyed radio listeners based on this data.

City State / ZIP Code Associations

To find the ZIP Code for a mailing address, check out our ZIP+4 Code Lookup.
Questions and Comments | Return to ZIP Code Lookup and Address Information

28302 Process

28302 is associated with the following:

City Name	State	For this ZIP Code, the city name is:	ZIP Code Type
FAYETTEVILLE	NC	ACCEPTABLE (DEFAULT)	STANDARD

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City State / ZIP Code Associations

To find the ZIP Code for a mailing address, check out our ZIP+4 Code Lookup.
Questions and Comments | Return to ZIP Code Lookup and Address Information

27610 Process

27610 is associated with the following:

City Name	State	For this ZIP Code, the city name is:	ZIP Code Type
RALEIGH	NC	ACCEPTABLE (DEFAULT)	STANDARD

City State / ZIP Code Associations

To find the ZIP Code for a mailing address, check out our ZIP+4 Code Lookup.
Questions and Comments | Return to ZIP Code Lookup and Address Information

28353 Process

28353 is associated with the following:

City Name	State	For this ZIP Code, the city name is:	ZIP Code Type
LAURINBURG	NC	ACCEPTABLE (DEFAULT)	STANDARD

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City State / ZIP Code Associations

To find the ZIP Code for a mailing address, check out our ZIP+4 Code Lookup.
Questions and Comments | Return to ZIP Code Lookup and Address Information

27835 Process

27835 is associated with the following:

City Name	State	For this ZIP Code, the city name is:	ZIP Code Type
GREENVILLE	NC	ACCEPTABLE (DEFAULT)	STANDARD

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City State / ZIP Code Associations

To find the ZIP Code for a mailing address, check out our ZIP+4 Code Lookup.
Questions and Comments | Return to ZIP Code Lookup and Address Information

27885 Process

27885 is associated with the following:

City Name	State	For this ZIP Code, the city name is:	ZIP Code Type
SWANQUARTER	NC	ACCEPTABLE (DEFAULT)	STANDARD

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City State / ZIP Code Associations

To find the ZIP Code for a mailing address, check out our ZIP+4 Code Lookup.
Questions and Comments | Return to ZIP Code Lookup and Address Information

28504 Process

28504 is associated with the following:

City Name	State	For this ZIP Code, the city name is:	ZIP Code Type
KINSTON	NC	ACCEPTABLE (DEFAULT)	STANDARD

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City State / ZIP Code Associations

To find the ZIP Code for a mailing address, check out our ZIP+4 Code Lookup.
Questions and Comments | Return to ZIP Code Lookup and Address Information

28539 Process

28539 is associated with the following:

City Name	State	For this ZIP Code, the city name is:	ZIP Code Type
HUBERT	NC	ACCEPTABLE (DEFAULT)	STANDARD

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City State / ZIP Code Associations

To find the ZIP Code for a mailing address, check out our ZIP+4 Code Lookup.
Questions and Comments | Return to ZIP Code Lookup and Address Information

28547 Process

28547 is associated with the following:

City Name	State	For this ZIP Code, the city name is:	ZIP Code Type
CAMP LEJEUNE	NC	ACCEPTABLE (DEFAULT)	STANDARD

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City State / ZIP Code Associations

To find the ZIP Code for a mailing address, check out our ZIP+4 Code Lookup.
Questions and Comments | Return to ZIP Code Lookup and Address Information

28557 Process

28557 is associated with the following:

City Name	State	For this ZIP Code, the city name is:	ZIP Code Type
MOREHEAD CITY	NC	ACCEPTABLE (DEFAULT)	STANDARD

City State / ZIP Code Associations

To find the ZIP Code for a mailing address, check out our ZIP+4 Code Lookup.
Questions and Comments | Return to ZIP Code Lookup and Address Information

28582 Process

28582 is associated with the following:

City Name	State	For this ZIP Code, the city name is:	ZIP Code Type
STELLA	NC	ACCEPTABLE (DEFAULT)	STANDARD

City State / ZIP Code Associations

To find the ZIP Code for a mailing address, check out our ZIP+4 Code Lookup.
Questions and Comments | Return to ZIP Code Lookup and Address Information

22904 Process

22904 is associated with the following:

City Name	State	For this ZIP Code, the city name is:	ZIP Code Type
CHARLOTTESVILLE	VA	ACCEPTABLE (DEFAULT)	UNIQUE
CHARLOTTESVLE	VA	ACCEPTABLE	UNIQUE
NEWCOMB HALL	VA	ACCEPTABLE	UNIQUE

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City State / ZIP Code Associations

To find the ZIP Code for a mailing address, check out our ZIP+4 Code Lookup.
Questions and Comments | Return to ZIP Code Lookup and Address Information

22906 Process

22906 is associated with the following:

City Name	State	For this ZIP Code, the city name is:	ZIP Code Type
CHARLOTTESVILLE	VA	ACCEPTABLE (DEFAULT)	STANDARD
CHARLOTTESVLE	VA	ACCEPTABLE	STANDARD

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City State / ZIP Code Associations

To find the ZIP Code for a mailing address, check out our ZIP+4 Code Lookup.
Questions and Comments | Return to ZIP Code Lookup and Address Information

23003 Process

23003 is associated with the following:

City Name	State	For this ZIP Code, the city name is:	ZIP Code Type
ARK	VA	ACCEPTABLE (DEFAULT)	PO BOX ONLY
AKK	VA	NOT ACCEPTABLE- USE ARK	PO BOX ONLY

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City State / ZIP Code Associations

To find the ZIP Code for a mailing address, check out our ZIP+4 Code Lookup.
Questions and Comments | Return to ZIP Code Lookup and Address Information

23347 Process

23347 is associated with the following:

City Name	State	For this ZIP Code, the city name is:	ZIP Code Type
EASTVILLE	VA	ACCEPTABLE (DEFAULT)	PO BOX ONLY

City State / ZIP Code Associations

To find the ZIP Code for a mailing address, check out our ZIP+4 Code Lookup.
Questions and Comments | Return to ZIP Code Lookup and Address Information

23075 Process

23075 is associated with the following:

City Name	State	For this ZIP Code, the city name is:	ZIP Code Type
HIGHLAND SPRINGS	VA	ACCEPTABLE (DEFAULT)	STANDARD
HIGHLAND SPGS	VA	ACCEPTABLE	STANDARD

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City State / ZIP Code Associations

To find the ZIP Code for a mailing address, check out our ZIP+4 Code Lookup.
Questions and Comments | Return to ZIP Code Lookup and Address Information

23116 Process

23116 is associated with the following:

City Name	State	For this ZIP Code, the city name is:	ZIP Code Type
MECHANICSVILLE	VA	ACCEPTABLE (DEFAULT)	STANDARD

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City State / ZIP Code Associations

To find the ZIP Code for a mailing address, check out our ZIP+4 Code Lookup.
Questions and Comments | Return to ZIP Code Lookup and Address Information

24590 Process

24590 is associated with the following:

City Name	State	For this ZIP Code, the city name is:	ZIP Code Type
SCOTTSVILLE	VA	ACCEPTABLE (DEFAULT)	STANDARD

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City State / ZIP Code Associations

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23906 Process

The ZIP Code you entered could not be found in our database. Please confirm the ZIP Code and try again.

If you are certain the ZIP Code you entered is valid, please send an email to incsc@email.usps.gov describing the problem. Thank you for using our Web site.

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City State / ZIP Code Associations

To find the ZIP Code for a mailing address, check out our ZIP+4 Code Lookup.
Questions and Comments | Return to ZIP Code Lookup and Address Information

23246 Process

The ZIP Code you entered could not be found in our database. Please confirm the ZIP Code and try again.

If you are certain the ZIP Code you entered is valid, please send an email to incsc@email.usps.gov describing the problem. Thank you for using our Web site.

Version 3.2 Database 05/1999

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